

REMARKS

Applicants respectfully request consideration of the evidence of the state of the art teaching away from the claimed invention provided in the Supplemental Response containing the Aastrup Declaration. Claims 1-5, 8-10 and 23-28 are pending.

35 U.S.C. §103 Rejection

Claims 1-5 and 8-10 and 25-28 were rejected as unpatentable under 35 U.S.C. §103 over Josse et al. (U.S. Patent 5,852,229). This rejection was based on the Examiner's unsupported assertion that Josse et al. somewhere, somehow suggests that changing (but without indicating which way or how) electrode size will impact sensitivity. But neither Josse et al. nor the Examiner suggest how to change electrode size in terms of larger or smaller, different shape other than circle, etc. Therefore, applicants continue to traverse this rejection because (1) applicants have already submitted evidence of surprising and unexpected results that seems to have been ignored in the Second Advisory Action, (2) the evidence submitted (as discussed in the Supplemental Amendment) already satisfies applicants burden of proof in providing evidence of surprising results and unexpected benefit, and (3) the Examiner continues to erroneously use some strange standard that trying to find something suggests the actual results obtained, turning the entire notion of invention and research on its head. Applicants shall first address the Second Advisory Action.

In the Second Advisory Action dated 05 March 2008, the Examiner somehow contended that the Aastrup Declaration was not sufficient to overcome this rejection. Inexplicably, the Examiner alleged "There is no evidence that one of ordinary skill in the art at the time the invention was made that would prevent or preclude one of ordinary skill in the art *to vary the size of the electrode to obtain different response characteristics.*" (emphasis added). However, the issue is not one of varying the size of the electrode, the evidence provided in the Aastrup Declaration was one of which direction the size should change.

It appears that despite the Examiner's contention, the Aastrup Declaration does, in fact, address the core teaching away from issue. The premise of the present rejection (as set forth in the first Advisory Action and the interview) was that Josse et al. allegedly "suggests" that the size of the electrode should be changed to improve sensitivity. While applicants dispute whether that suggestion was actually expressed anywhere in the Josse et al. reference, out an abundance of caution, applicants provided the Aastrup Declaration. The Aastrup Declaration shows a teaching way from argument using references roughly contemporaneous (although not prior art) that a person of ordinary skill in the art would have enlarged electrode size. Specifically, paragraph 5 of the Aastrup Declaration shows a re-drawn graph (with the same data) from Lu et al. II of electrode diameter versus sensitivity. This graph shows that electrode areas much larger than 15 mm² were

suggested to improve sensitivity. It should be noted that the Lu et al. II data was provided with circular electrodes and diameter in mm. Therefore, in order to relate these data to an area measurement of a circular electrode, one must use the radius squared times pi. Therefore, the Examiner's statement ("There is no evidence that one of ordinary skill in the art at the time the invention was made that would prevent or preclude one of ordinary skill in the art *to vary the size of the electrode to obtain different response characteristics.*") is flat out wrong and contrary to the evidence of record.

The Examiner's next sentence is equally perplexing. The Examiner next alleges ("Furthermore, there is no evidence that an electrode having an area of less than 15mm² is novel, much less not within the realm of capabilities (i.e. obvious) of one having ordinary skill in the art at the time the invention was made to try or attempt."). Applicants will break that sentence down. The first clause alleges a lack of novelty for the less than 15mm² limitation of claim 1. However, it should be noted that the present rejection is under 35 U.S.C. §103, not a lack of novelty. The Examiner has not met a *prima facie* showing of anticipation over Josse et al. Nor could the Examiner attempt to make such a showing because Josse et al. does not disclose each and every limitation of the pending claims. The second clause ("much less not within the realm of capabilities (i.e. obvious) of one having ordinary skill in the art at the time the invention was made") is also off point. Applicant is unaware of any case law indicating that "the realm of possibilities" is a new standard under 35 U.S.C. §103. Taking the examiner's logic to its conclusion, everything is within the "realm of possibilities" (at least in a free society), even the undersigned attorney winning the lottery¹, and therefore everything is obvious and there will be no more inventions. We all need to find another line of work as intellectual property will no longer exist. The third and final clause of the above-quoted sentence in this paragraph is that "attempting" or "trying" is now the new standard for obviousness. This is a variant of the new "realm of possibilities" standard. It should be noted that there remains a "reasonable expectation of success" standard as if one were to read a document and then try something, the resultant claim would only be obvious if there was a reasonable expectation of success. Otherwise, there could be no surprising results because the Examiner only looks at the attempt, not the outcome. Clearly, the above-quoted sentence is illogical and contrary to centuries of patent precedent, starting with Thomas Jefferson.

Next the Examiner grabs a few passages from the Supreme Court KSR decision. However, the *KSR* decision with regard to combining reference does not apply to the present rejection. It should be noted that the present rejection is over Josse et al. and that is one or a single reference. Applicants did not make an argument regarding an improper combination of references

¹ Given the extremely low probability of actually winning a large lottery, does that mean there is an equally extremely low probability of showing invention to this Examiner?

because there is no combination of references. Accordingly, *KSR* does not apply to the present rejection.

The Examiner concludes: "Once again, the Examiner states that one of ordinary skill in the art is well aware of the basic physics regarding the problem/issue at hand, that changes in the size of the electrode will lead to changes in response characteristics." Applicant respectfully urges the Examiner to go back and read the pending claims, the Aastrup Declaration and the three references cited in the Aastrup Declaration. All are of record herein. Particularly, it would be advisable to look at the x-axis of the figure provided in Figure 5 that is presented in mm of diameter (from the Lu et al. II reference) and then look at that graph when converted to area. The greatest sensitivity is 20 mm² or larger. Yet the pending claims have a limitation of 15 mm² or smaller. This is not suggested Josse et al. This is not suggested by the three contemporaneous references in the Aastrup Declaration. In fact, despite the Examiner's categorical statement regarding the laws of physics, the surprising results achieved in the present invention very much teach away from Josse et al., teach away from the three references cited in the Aastrup Declaration (references that actually do change the size of the electrodes, unlike Josse et al.), and perhaps even question the Examiner's statement regarding the laws of physics.

Moreover, the Examiner keeps trying to indicate that a person of ordinary skill in the art is a physicist or skilled in fluid dynamics (as the Examiner indicated during the interview). Applicants respectfully disagree and indicate that the person of ordinary skill in the art is more of a chemical engineer looking to produce a mass balance instrument that has improved characteristics and not concerned about the theoretical physics basis of the invention.

Therefore, applicants are providing this continued prosecution application to respectfully urge the Examiner to consider the evidence of record, particularly the Aastrup Declaration and supporting references, and apply actual precedent, not some new standard that would eliminate the possibility of invention from ever happening in the world.

With regard to the actual rejection, the prosecution history already addresses that this rejection seems to imply that anyone attempting to look at improved sensitivity by varying the size of the electrode, larger or smaller is obvious to try. But the Aastrup Declaration shows three references that did exactly that and found the published relationships between electrode area (when using circular electrodes and reported in mm of diameter) that each suggested to make larger sized electrodes, larger than 20 mm², in order to improve sensitivity. Therefore, the references cited in the Aastrup Declaration teach away from the claimed invention. This evidence of teaching away is of record and must be considered, despite the fact that it does not support the

“realm of possibilities” or “obvious to try” standards the Examiner is erroneously employing². Teaching away from trumps all the speculation and unsupported conclusions in the Second Advisory Action. Therefore, applicants have met their burden of proof in overcoming a 35 U.S.C. §103 rejection over Josse et al. using valuable references in the Aastrup Declaration.

In view of the foregoing remarks, Aastrup Declaration, and the entire file history, applicants respectfully request allowance of claims 1-5, 8-10 and 23-28.

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² It should be noted that the Examiner must consider the evidence of record. Just because the three references in the Aastrup Declaration are not prior art does not mean the Examiner can ignore them. The Examiner must consider the evidence submitted.